

# Claims

- [c1] 1. A swirler assembly comprising:
- a ferrule body comprising
    - 1) a substantially square base having an upper surface and a lower surface, having opposed first and second side edges, and having a centrally-positioned opening formed therein,
    - 2) a ferrule extending from the upper surface and the central opening, and
    - 3) a plurality of protrusions along the upper surface of each side edge, and
  - a unitary swirler body comprising:
    - 1) a first swirl section having a plurality of angularly directed passages,
    - 2) a second swirl section comprising a venturi and a plurality of oppositely-angled, directed passages disposed coaxially around the venturi, and
    - 3) a pair of rails, each comprising an inwardly-extending flange, each formed on opposite sides of the venturi, wherein the rails engage the protrusions along the opposite side edges of the ferrule body to limit separation of ferrule body and the unitary swirler body.

- [c2] 2. The swirler assembly of claim 1 further comprising a stop tab formed on the unitary swirler body.
- [c3] 3. The swirler assembly of claim 2 wherein the stop tab is formed on an outer edge of the unitary swirler body.
- [c4] 4. The swirler assembly of claim 3 wherein the stop tab defines a planar surface that is perpendicular to the rail.
- [c5] 5. The swirler assembly of claim 3 further comprising a tack weld applied to the unitary swirler body, the tack weld being spaced from the stop tab so as to permit limited lateral movement of the ferrule body relative to the unitary swirler body.
- [c6] 6. The swirler assembly of claim 5 further comprising a weld tab formed on the unitary swirler body, wherein the tack weld is applied to the weld tab.
- [c7] 7. The swirler assembly of claim 1 wherein the pair of rails are parallel to one another.
- [c8] 8. The swirler assembly of claim 1 wherein the pair of rails are spaced apart so as to permit limited lateral movement of the ferrule body relative to the unitary swirler body.
- [c9] 9. The swirler assembly of claim 1 wherein the ferrule body is substantially symmetrical relative to a plane

passing through a centerline of the ferrule and through either a first axis X or a second axis Y.

[c10] 10. A swirler assembly comprising:

a ferrule body comprising

1) a substantially square base having an upper surface and a lower surface, having opposed first and second side edges, and having a centrally-positioned opening formed therein,

2) a ferrule extending from the upper surface and the central opening, and

3) a plurality of protrusions along the upper surface of each side edge, and

a unitary swirler body comprising:

1) a first swirl section having a plurality of angularly directed passages,

2) a second swirl section comprising a venturi and a plurality of oppositely-angled, directed passages disposed coaxially around the venturi,

3) a pair of rails, parallel to one another, each comprising an inwardly-extending flange, each formed on opposite sides of the venturi,

4) a stop tab, comprising a planar surface that is perpendicular to the rails, and

5) a weld tab, comprising a tack weld applied thereon, wherein the tack weld and the stop tab are spaced apart,

and the pair of rails are spaced apart, so as to permit limited lateral movement of the ferrule body relative to the unitary swirler body, and wherein the rails engage the protrusions along the opposite side edges of the ferrule body to limit separation of ferrule body and the unitary swirler body.